

A Conceptual Model for Understanding Social Practices in Family Forestry

Gun Lidestav and Tomas Nordfjell
Department of Silviculture
Swedish University of Agricultural Sciences
S-901 83 Umeå, Sweden

This paper presents a conceptual model for better understanding of the various aspects or phenomena in family forestry. In this model, land is considered as the basic resource around which work and family life are organised. With the land follows specific property rights, giving the children, as a result of marriage, the right to inheritance. To generate revenue from the capital invested or to increase the value of the property, self-employment in practical work and decision-making is needed. Taxes are charged on the revenue of the property. Gender has an impact on inheritance position, division of work, and pattern of marriage. By connecting these institutions or concepts to each other with threads of social practices, a 'cobweb model' is developed which allows the structure of the social reality in family forestry to be visualised. The cobweb model has been applied in order to examine social practices in contemporary Swedish family forestry. Results based on a nationwide survey, reveal significant differences between different forest owner categories regarding the impact of gender, inheritance, marriage, property rights and self-employment. Furthermore, the analytical potential of the model is demonstrated.

Keywords: conceptual model, gender, inheritance positions, marriage, property rights, self-employment

INTRODUCTION

As demonstrated in a number of studies, contemporary family forestry in Europe and North America is characterised by heterogeneity and complexity in terms of ownership structure, owners' objectives and management practices¹. Together with continuing changes within the ownership there exists a striking persistency regarding some aspects such as the desire to keep the forestland in the hands of the family and a social identity attached to the forest. In order to understand the paradox of changeability and persistence better, institutions² and concepts of significance should be identified and combined into a conceptual model. The objective of this

¹ For an overview, see Ingemarsson (2004) and Wiersum *et al.* (2005).

² *Institution* is a general concept in sociological theory referring to a set of cultural rules regulating social activities by laws, standards, conventions and material conditions.

paper is to develop and discuss such a conceptual model, based on Swedish conditions but with general traits.

A basic theoretical point of departure is that the relation between society and an individual is regarded as different sides of the same thing. This implies that there is an interchange between structures and actions in so-called social practices, settled in a social and cultural context (Bourdieu 1986, Bhaskar 1998). The individual is always preceded by the society, which sets the framework in terms of possibilities and restrictions. However, individuals constitute the society by filling up its social practices. This can be done by reproducing a specific institution or by transformation. In the latter case, individuals become a social force that changes – and constructs new – social practices and structures. Furthermore, people's actions are both conscious and unconscious production and reproduction.

In the following sections, seven concepts or institutions that constitute the model will be introduced and then integrated. The model is then applied on contemporary Swedish family forestry, and the empirical findings are discussed in relation to the model.

A CONCEPTUAL MODEL OF FAMILY FORESTRY

The model consists of seven basic and general concepts or institutions: *land*, *property rights*, *marriage*, *inheritance*, *taxes*, *gender* and *social practices*, organised in the form of a 'cobweb'. *Land* is the 'hub' and *social practices* the tangential thread that connects the other concepts and institutions to a web. The cobweb metaphor is considered appropriate as the included concepts or institutions, as well as family forestry as such, display an abundance of variation, flexibility and tenacity.

The Emergence of Family Forestry

In most societies, *land* is an essential factor of production for food, timber, wood fibre or other human needs. Furthermore, land is often a source of taxation revenue for the State. Together with the land and its distribution in private, common or public hands, production can be organised on a small- or large-scale basis. The distribution of land between the various owner categories, and how the rights and obligations in connection to land ownership are defined, differs considerably from time to time and from society to society. Consequently, these social and economic constructions effect the creation of wealth for individuals as well as for the entire society.

In Sweden, there are 22.6 M ha of productive forestland (National Board of Forestry 2004) whereof 51% belongs to non-industrial private forest (NIPF), also referred to as family forestry³. As this article focuses on forestland owned, managed and transferred from one generation to another within families, the term 'family forestry' will be adopted. Family forestry in contemporary Sweden is deeply rooted in household-based farming (Törnqvist 1995). In the pre-modern society⁴, the forestland that surrounded the villages was used as a common resource for grazing

³ For a discussion on the use of different terminology regarding minor forest properties owned by private persons, see Harrison *et al.* 2002.

⁴ *Pre-modern society* here refers to the period before farmland and farm products were regarded as commodities and incorporated in the market economy.

and for taking fuelwood and timber for domestic construction (Kardell 2003). As the demand for timber and food grew due to an increased population and foreign demand of timber products, it became important to determine boundary lines and ownership, and to define rights connected to the ownership (Gadd 2000). This process started earlier in southern Sweden than in the north⁵, and lead to a relocation of farms from village nuclei to scattered settlements. To each farm, arable land, pasture and forestland were allotted. A similar process took place in the villages which existed much more sparsely in the north. However, large areas had almost no permanent population and the major driving force was to colonise these regions. Therefore, forestland that since the late Middle Ages had been claimed by the Crown (Gadd 2000) was distributed to settlers according to the principle that the size should be sufficient to establish a small farm (Westholm 1992, Törnqvist 1995). Even though the value of the forest production in family forestry as a whole has for decades exceeded the value of farm production, forestry was until recently regarded by the society as a supporting business to agriculture (Törnqvist 1995).

Rights and Obligations Connected to Land Ownership

With the ownership of land (property) follows particular so-called *property rights*, which generally are divided into (i) the right to use the property and the revenue from the property, (ii) the right to exclude others from the property, and (iii) the right to divide and transfer the property or on some of the above mentioned rights (Furubotn and Pertovich 1972). More specifically, the characteristics of property rights include physical extent, comprehensiveness, excludability, transferability, divisibility and duration. These rights are not absolute, but rather subject to a number of restrictions, depending on time and place. Consequently, the rights and the regulations codified or prescribed by law or by common practice make up the concept of property rights. In the case of Swedish forestland, a number of restrictions on when and how cuttings can be performed including standards for regeneration and nature conservation are set by the *Forestry Act* (SFS 1979, SFS 1993)⁶. The owners have an exclusive right to use the forest for game and fish⁷, while wild berries and mushrooms are considered as right of common along with open access for walking. The right to utilise other goods, such as trees, gravel and peat belongs to the owner, who within the limits of the *Forestry Act* and the Environmental Code of 1998 has the right to prevent others from such use. The transfer of the property or some of its assets can be done permanently by sales agreement or temporarily for a specified period, e.g. by tenancy agreement of arable land, hunting rights or sales of standing timber. The manner of transfer of a forest property, as well as the circle of persons that can acquire it, is among the issues

⁵ Three major redistribution processes and a delimitation process, that involved the fixing of boundaries between Crown and private land, have taken place in Sweden. The first was initiated around 1750, the second around 1800, and the third, which in particular affected the villages in the northern woodlands, began in the 1820s (Heckscher 1957).

⁶ A major revision of the present *Forestry Act* was undertaken in 1993 (SFS 1993:553), based on the policy that production goals and conservation goals are both given equal importance. Furthermore, a number of previous compulsory regulations were made voluntarily (SFS 1979, Skogsstyrelsen 1994).

⁷ There are more than 100,000 lakes as well as rivers and creeks in Sweden which are considered part of the surrounding forest property.

regulated by the 'Jordförvärvslag' (SFS 1979), a law concerning restrictions on the right to acquire farm property. However, direct heirs can acquire forestland without permit to acquire real estate.

In contemporary Swedish society, the concept of property rights is to a large extent connected to the owner as an individual, and also less relative than in the pre-modern society (Sjöberg and Ågren 2003). Before industrialisation, land constituted the main form of capital in society, and consequently the control of land was basically a question of economic and political power. Property rights at the time were different to those prevailing today and also depended on the category of land (Gadd 2000). In the year 1700, one third of the land was considered as farmland exempted from duties to the Crown, another third as Crown land and one third as taxed land in possession of freeholders. The first of these categories could only be owned by noblemen, and the farmers who actually cultivated the land had no inheritable right of possession. They paid rent to the noblemen but no taxes to the Crown. Farmers on Crown land had an inheritable right of possession and paid rent to the Crown but no taxes. Only the freeholders owned the land that they cultivated and paid taxes to the Crown. They also had political representation in the Parliament. Their right to transfer the property to anybody was, however, somewhat restricted and if the farmer failed to pay the taxes for three years, the farm was ceded to the Crown. Due to lack of finances by the government, combined with a political belief in the benefits of private small-scale ownership of land as a means to improve farm production and thereby increase revenue from taxation, an extensive sale of Crown land took place during the 18th century. In 1878, only 8% of the land was owned by the Crown while 60% was freehold land (Gadd 2000). It is from these farms and the colonist's farms, consisting of arable land and forestland, that contemporary family forestry has emerged (Törnqvist 1995). In the course of time, timber production has become a more important source of income than food production for a majority of owners.

The Crucial Question of Transferring the Farm from One Generation to Another

The transfer of the farm land, together with buildings and personal chattels, from one generation to another is a crucial issue in a farming society (Löfgren 1977). There are conflicting interests between on one hand the wish to not split up the hard-earned capital, and on the other a desire to provide the adult children with possibilities of livelihood. There are two major principles for *inheritance*; the principle of first born (son) and the principle of equal rights or real estate, sometimes combined with or overruled by a last will. The principle of equal rights (real estate), which implies that all children receive a part of the real estate, is more commonly practiced in regions with diversified occupations and where agriculture has not dominated. In regions with a dominance of agriculture, especially where land ownership has been associated with political power within a feudal system, the principle of the first born has generally been adopted. In a European context, the equal right principle is more prevalent in Southern Europe while the first born principle dominates in Northern Europe (Schwarz 1966, Thirsk 1978). Traditionally, the principle of the first born (son) has been practiced in most parts of Sweden. However, there has been a shift in tradition towards an equal rights situation during recent decades (Lidestav 1998).

Marriage as an Institution for Reproduction

No matter which principle of procurement is practiced, in a specific case or generally speaking, *marriage* and matrimonial laws constitute an essential institution (Niskanen 2001, Sjöberg and Ågren 2003) with its impact on procurement being twofold. By marriage, properties from two families (kins) are brought together as long as the marriage lasts or even longer if the reproductive function of the marriage is fulfilled, i.e. the succession by one or more suitable heirs on the family farm is ensured. Consequently, society has regarded it necessary to regulate marriage in order to ensure proper management and tax-paying ability. In Sweden before 1970, children born out of wedlock did not inherit their father's property, but since then they have equal right of inheritance. When one partner in a marriage dies, the surviving spouse inherits all, and only when he or she dies do the children inherit all. It is however common practice for the forestland to be transferred as gift or sold to one or more (sometimes all) of the children when they establish their own household or when the parents become pensioners (Törnqvist 1995). If the forestland is transferred to one child in a group of siblings, the others are supposed to be compensated by money or other property⁸. In cases where the property is large enough to allow division, the other siblings may receive a minor part, e.g. a woodlot.

The Social and Cultural Impact of being Man or Woman

In Sweden, a daughter's rights to inherit were only half of that of a son's until 1845, but since then sons and daughters have had equal inheritance rights. However, during the time when women did not have full legal capacity⁹ they had no right to manage their own affairs (Niskanen 2001). At the end of the 20th century, two thirds of the forest owners who had acquired the forestland from their parents or relatives were men, and the average size of forest properties held by men was 18% larger than those held by women. This unequal situation can therefore not be explained by legal discrimination based on biological sex (Lidestav 2003). On the other hand, by introducing the concept of *gender* as the social and cultural aspects of being man or woman¹⁰, it is possible to understand better and explain property size differences and unequal ownership distribution (Lidestav and Ekström 2000). In every society there are specific ideas of 'him' and 'her', usually referred to as masculinity and femininity respectively. These ideas may differ greatly from society to society and from time to time, which implies that they are 'social constructions' shaped and transformed by men and women according to how they understand and represent themselves in relation to others. A common feature according to most gender researchers is, however, a gender order that strives to keep 'him' and 'her' apart, and

⁸ This can be done simultaneously or when the inheritance is divided after the death of the parents in accordance to the inheritance law.

⁹ Full legal capacity was given to unmarried women in 1863 and to married women in 1920. However, in order to 'protect family farming', provisional regulations for couples married before 1920, were introduced in 1920. According to these regulations, the husband had the right to continuously manage the property that the wife had acquired (before 1920) until 1950 (Niskanen 2001).

¹⁰ The concept of 'gender' was first introduced in psychiatry by Stoller (1968), and in anthropology by Rubin (1975), to distinguish the cultural and social aspects of being man or woman from the biological 'gender'. Since the beginning of 1980s, gender issues have been on the agenda in rural research (Brandth 1995).

in addition to subordinate women and women's interests to men (Acker 1992). In family farming and forestry, it seems that traditional ideas of gender in terms of women's and men's inheritance positions, division of work and influence, and participation in the management, prevail to a large extent (Haugen 1994, Brandth 1995, Brandth and Haugen 1998, Flygare 1999, Lidestav 2001).

Taxation as Fiscal and Policy Tool

Taxes on land owned and managed by taxpaying farmers (i.e. freeholders) was a main source of income for the Swedish Crown in the former farming society. Consequently, it was of vital importance for the Crown to bring about a distribution of land that ensured the farmers' taxpaying ability. Regulations for division of land into separate farms were therefore also related to taxpaying ability. A main rule has been that the size of a farm should be sufficient to support a family (ensure the reproduction of the family farm) and to produce a surplus, i.e. taxes to fund public expenses (Westholm 1992). Principles for the tax system have until recently been based on the ideas of a traditional farm enterprise where the owner and family members lived and worked (Törnqvist 1995).

A fundamental issue for the fiscal legislation is how to deal with the gradual value increment of a forest. Basically, there are two options, namely taxation based on the yearly increment and taxation on income from sale of timber. The latter principle is applied in Sweden today. Further, the Swedish tax system includes three income sources – capital, work and business activity. Sale of timber is defined as income from business activity, and no taxes on real estate are charged on forest ownership. In order to make more even distributions of income and tax over time from timber sales that, for most forest owners, are restricted to few occasions during a possession period, various rules and measures for income disposition have been included in the system (Håkansson 2002, Rabe 2002, Holmgren *et al.* 2005).

Being a source of government revenue, the taxation system is designed to support forest policy, i.e. to make the forest owners behave in accordance to national goals. As the wood processing industry is vital for Sweden's economy, it has become a national goal to produce enough timber to satisfy the needs of the industry. In this context it seems that the 'pure' fiscal purpose has become less important while the forest policy purpose has gained higher priority (Törnqvist 1995)¹¹.

The taxation system set up particular conditions for transferring the forestland depending on whether transferred as a gift, as acquisition within the family, or purchase on the market. From a taxation point of view, it is advantageous for the parents and the children to transfer the value of the property as forest instead of money (Törnqvist 1995). In this way, taxation on the accumulated value as a result of work and capital invested in the forest can be reduced.

Self-employment as a Key to Ownership and Wealth

A basic feature in family farming and family forestry is the input of work by the owner and the family members, i.e. self-employment in practical work and decision-making. In a traditional farming society, little revenue from the capital invested in agricultural and forest land could be obtained by means other than work performed

¹¹ A number of Swedish official reports and research studies have dealt with the impact of taxation on forest owners' management behaviour (e.g. SOU 1973, 1992, 1997).

by the household. Historically, there has also been an obvious connection between work, cultivation and property rights. In the 17th century a man could gain property rights to land, through work and proper cultivation but could also lose these rights if he neglected the property (Ågren 1997). In order to promote the colonisation of the interior of northern Sweden, the Crown offered property rights and exemption from taxes for several years to those who, by their own work, cleared and cultivated forestland (Sörlin 1988, Morell 2001). Even though conditions have changed considerably in terms of work performance (motor-manual or mechanised instead of manual work), and how proper management and property rights are viewed, these phenomena remain closely interrelated in the identity of the forest owners as a group (Ager 1995, Törnqvist 1995).

An overall goal for most forest owners is to hold on to the property, and to manage it in such a way that it can be handed over to the next generation in an equal or even better condition than when they received it (Lönnstedt 1997). By helping the parents, usually the father, in the various farm or forestry tasks, a child can not only gain experience but also a more favourable inheritance position compared to the other siblings (Haugen 1994, Flygare 1999, Lidestav 2003). However, some tasks are considered to be more important than others and confer on the performer 'more credits', and this status is generally connected to gender. Basically, men's work tends to be regarded as more qualified and essential¹².

Until the middle of 1960s, logging operations were generally performed with the same kind of technology in both industrial forestry and family forestry, i.e. with axes, handsaws and chainsaws for harvesting and extraction (Andersson 1982). A large number of the industrial forestry loggers were also small-scale farmers, who were self-employed in their own forest and delivered timber to various buyers. In terms of productivity and cost-efficiency, there was little difference between family forestry and industrial forestry (Andersson 1982). However, mechanisation and a much increased productivity in industrial forestry – together with an extensive closing down of small farm business combined with an increased number of non-resident forest owners working in other professions – have resulted in a decreasing volume of timber cut and delivered to wood-processing industries by self-employed forest owners (Dahlin and Eriksson 1992). Based on these observations and the idea of human rationality as an issue restricted to economic calculations, a general opinion (and perhaps myth) has developed claiming that self-employment in family forestry is dying out. On the other hand, a number of studies have indicated that self-employment remains as a considerable input to total work performed in Swedish forestry (Ager 1995, Törnqvist 1995, Lidestav and Nordfjell 2003, National Board of Forestry 2004). Further, self-employment is not only motivated by profitability; control of the conditions and development of the forest, job satisfaction and family tradition seem to be at least as important (Ager 1995, Törnqvist 1995).

As mentioned above, keeping up with self-employment is also a question of motivating inheritance and ownership for the younger generation (Haugen 1994, Flygare 1999, Lidestav 2003). Their input of work may be paid, but considering the taxation system, it is likely that family members tend to regard their work as a kind

¹² Irrespective of differences in inheritance legislation, Swedish and Norwegian studies have demonstrated that gender and participation in farm and forestry work have a strong impact in relation to inheritance positions (Haugen 1994, Flygare 1999, Lidestav 2003).

of investment that they can benefit from when they take over the forestland. In addition, their labour input may be accepted as a legitimate reason for one of the siblings to take over the property at a lower price than market value or taxation value. In summary, there seems to be a wide range of more or less interrelated and rational reasons for self-employment. However, different categories¹³ of forest owners have different sets of reasons, and also different types of work and levels of activity (Ager 1995, Törnqvist 1995).

Forestland Surrounded by a Web of Concepts

The continued existence of *self-employment* (i.e. practical work and decision-making) is in one way or another related to the concepts and institutions presented above: *land*, *property rights*, *inheritance*, *marriage*, *gender* and *taxes*. By bringing them all together, a general model may be formulated which will aid in better understanding of the various aspects and phenomena in family forestry. To commence, *land* can be considered as the basic resource (hub) around which work and family life is organised. With the land follows particular *property rights*, giving the children, as a result of *marriage*, the right to *inheritance*. Beside these reproductive prerequisites, work has to be invested in order to derive revenue from the capital invested or to increase the value of the property. On this value increment, *taxes* are charged. Prevailing ideas of masculinity and femininity in general, together with particular ideas on how to be a proper forest owner (i.e. *gender*), have an impact on division of work (self-employment), inheritance position and patterns of *marriage*. Connecting these institutions or concepts as threads to the 'hub' of land, gives rise to a 'wheel model'. However, these 'threads' are mobile, and they are connected to each other not only by the hub but also directly, i.e. they effect each other mutually. The connections can, using an everyday expression, be named 'tradition' or, with a sociology concept, *social practice*. Taken as a whole these concepts give rise to a 'cobweb model', which depicts the social structure of the social reality in family forestry (Figure 1). Translated to the terminology used by Bourdieu¹⁴, the model can be regarded as a field which constitutes the social reality within which the agents exist. The structural aspects of the social field are the networks that express the similarities and differences in the agents' social and material conditions. Their existence is independent of the social agents' own consciousness but affects and limits the agents' practices. The constructivist aspect of the social reality is the symbolic one. It is created by the agents in concurrence but even though it is constructed it is still perceived as reality by the agents. Together, the structural and constructivist aspects of social reality create the agents' different habitus, which, in short, can be described as a set of dispositions bringing forth the agents' practice and perceptions (Miegel and Johansson 2002). This implies that the model should be comprehended as both giving structure to forest

¹³ Ager (1995) identified three categories of self-employed forest owners (short-time 'actors', semi-professionals and professionals) and four main categories of motives (control of the condition and development of the forest, various forms of job satisfaction, economic motives, and family tradition). Except for job satisfaction, Törnqvist (1995) presented similar motives, and in particular stressed the impact of keeping up with a management tradition. The point of departure for his analysis is the household, which he categorises as 'farm', 'mixed' and 'wage'.

¹⁴ Pierre Bourdieu can be regarded as a 'structural constructivist', and has among other things developed the concepts of 'habitus' and 'field' (Bourdieu 1986).

owners' actions and *social practices* and showing how identities and social practices are constructed. Furthermore, different individuals or sub-groups of forest owners may take different positions in the cobweb model. Some may take a central position, others a more peripheral position. The identity or social practice of a particular individual or sub-group may be more 'constructed' by self-employment than the identity and social practice of another individual or sub-group, whose identity to a larger extent is 'constructed' by gender, and so forth.

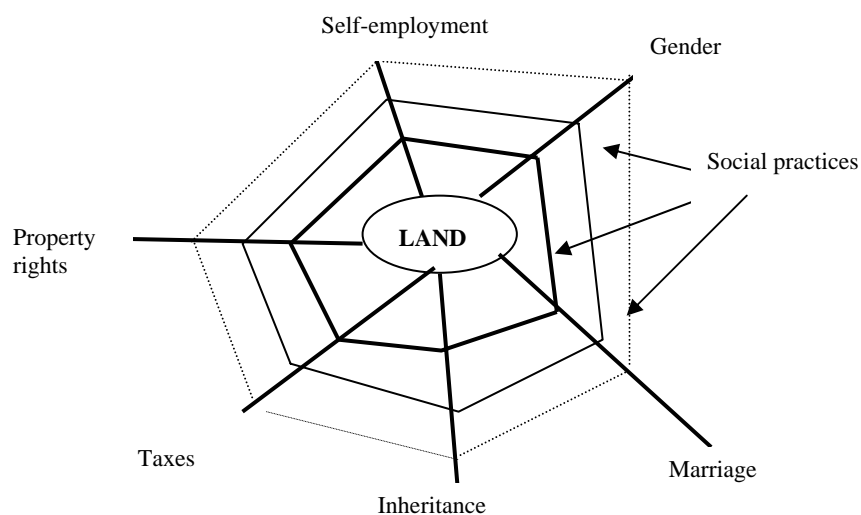


Figure 1. A conceptual model for understanding social practices in family forestry

APPLYING THE COBWEB MODEL ON CONTEMPORARY FAMILY FORESTRY IN SWEDEN

Based on the already well documented heterogeneity within family forestry or in a broader sense NIPF ownership¹⁵, the social practice of various categories of owners can be analysed and interpreted. In this section male owners vs. female owners, resident owners vs. non-resident owners, members in forest owners association vs. non-members, and owner of small, medium or large size properties, will be examined concerning gender, inheritance, marriage property rights and self-employment (practical work and decision-making). Results from a sample survey will be presented and discussed. As the survey did not include any taxation questions, this aspect could not be considered.

Survey Design

A nationwide postal survey was conducted during the winter of 1997-98 when 2,500 forest owners, 18 to 80 years old, each owning at least 5 ha of forestland, were asked a number of questions about themselves as forest owners. These forest owners were

¹⁵ For a comprehensive overview of NIPF ownership heterogeneity see Ingemarsson 2004 and Wiersum *et al.* 2005.

selected from a sampling frame prepared by combining a national register of forest properties with a national register of forest owners, the so-called 'Skogsdataregistret'. The total number of owners (N) was 322,239 persons. These were stratified into three holding size classes (5-49 ha, 50-399 ha and > 399 ha) and six ownership classes (single male owner; single female owner; male owners only; female owners only; male and female owners, male owner chosen; male and female owners, female owner chosen). Simple random sampling was conducted within each of these 18 strata. This design was used in order to avoid bias in cases of partner ownership where the operationally most active owner is usually the one registered as contact person. The sampling frame was prepared by Statistics Sweden, which also selected the samples. The response rate was 60%. A non-respondent analysis was conducted, using register information on property size and owner's age. The mean values and proportion of forest owners in each response alternative were estimated. Hypotheses of equal mean values between categories of owners (e.g. male owners vs. female owners) were tested using t-test and 5% significance level. This analysis did not indicate any significant differences between respondents and non-respondents

Comparing Male and Female Owners

Male owners (MO) are almost twice as numerous as female owners (FO) and the mean size of male forest holdings is also somewhat larger (Table 1). No difference in marriage frequency was found, but women have more often than men become owners by attainment from spouses' parents. Consequently, men have more often attained the forest holding from their own parents, are more often single owners, and wish to a greater extent that *one* child will take over the property. Significant differences regarding self-employment are demonstrated, particularly regarding practical work and most of all in harvesting and extraction. While most men perceive themselves as bearing the main responsibility for decision-making and practical work, most women state that they share the main responsibility with their husbands or partner owners, or even have the main responsibility transferred to them. Although women to a lesser extent reside on the forest holding, they value housing more highly than men. They also have a higher appreciation of firewood/timber for own use and berries/mushrooms and outdoor life/recreation (Table 2). Regarding other assets (forest income, hunting and fishing, contact with native locality, keeping up with a forest farmer tradition), no significant differences were found. A significantly higher proportion of MO state that they are not willing to put aside any productive forest land for nature conservation purposes without compensation (32.0% vs. 21.0%). Although most men do not consider themselves as forest farmers, an even lower proportion of women do so. In conclusion, forest owner masculinity is at present very different from forest owner femininity and thereby also the identities and social practices that appear in contemporary family forestry.

Comparing Resident and Non-resident Owners

The number of resident owners (RO) is almost equal to the number of non-resident owners (NRO), but the former are older and have somewhat larger forest holdings (Table 1). No difference in marriage frequency was found, but RO have more often become owners by attainment from spouses' parents. A majority of RO own

properties together with their spouses (51.9%), while only 15.6 % of the NRO do so. RO wish to a higher extent that *one* child will take over the property, while NRO owners more often want *more than one* child to become the future owners. Significant differences regarding self-employment are demonstrated, particularly regarding practical work where RO to a much larger extent are active. Only in terms of participating in tax-declaration, NRO are more often represented than RO. Half of the RO and significantly less of the NRO perceive themselves only as bearing the main responsibility for decision-making and practical work. Among NRO, husbands and partner owners are more often involved in decision-making and practical work.

Regarding the valuation of the various goods on the forest holding, RO place higher priority on forest income, firewood/timber for own use, housing, and upkeep of a forest farmer tradition (Table 2). A significantly higher proportion of RO state that, without compensation, they are not willing to put aside any productive forestland for nature conservation purposes (34.2% vs. 23.0%). Although most RO do not consider themselves as forest farmers, even fewer NRO do so (Table 1). In conclusion, the identities and social practices that appear among RO differ from NRO. Results demonstrate a continued household-based ownership and management among RO, while NRO more often apply ownership and management across households.

Comparing Members in Forest Owners' Associations and Non-members

The proportion of members in forest owners' associations (MFOA) is almost equal to the proportion of non-members (NMFOA). The former are more often men, own larger forest holdings and also more frequently reside on their property (Table 1). No difference in marriage frequency was found, but NMFOA have more often become owners by attainment from spouses' parents. Ownership together with a spouse is equally common among MFOA as NMFOA, but MFOA wish to a higher extent that *one* child will take over the property while NMFOA owners more often want *more than one* child to become the future owners. Significant differences regarding self-employment are demonstrated, particularly regarding practical work where MFOA to a larger extent are active. Only in terms of participating in tax-declaration, no significant difference was found. Half of the MFOA and somewhat fewer of the NMFOA perceive themselves as bearing the main responsibility for decision-making and practical work. Among NMFOA, husbands and partner owners are more often involved in decision-making and practical work. Regarding the valuation of various goods on the forest holding, MFOA have higher appreciation of forest income, firewood/timber for own use, housing, contact with native locality, and upkeep of a forest farmer tradition (Table 2). A significantly higher proportion of MFOA state that they are not willing to put aside any productive forest land for nature conservation purposes without compensation (32.7% vs. 26.1%). Although most MFOA do not consider themselves as forest farmers, even fewer NFOA do so (Table 1). In conclusion, the identities and social practices that appear among MFOA differ from NMFOA; however, the magnitudes of differences are generally less than between MO and FO, and between RO and NRO.

Table 1. Comparison of forest owners categories regarding general ownership features and variables with relevance on gender, inheritance, management, marriage and property rights^a

Feature or variable	Gender ^b		Resident on FH ^b		Member in FOA ^b		Size of the FH ^b		
	Male	Female	Yes	No	Yes	No	Small	Medium	Large
Mean size of the FH (ha)	58.2a	49.4b	58.4a	52.9b	65.7a	46.6b	21.5a*	112.3b	650.6c*
Mean age of the owner (yr)	53.2a	52.6b	58.4a	52.9b	52.7a	54.0a	53.7a	51.7b	52.7ab
Distribution of owners (%)	62.9	37.1	49.0	51.0	49.6	50.4	63.5	35.1	1.4
Male owners (%)	100*	0*	67.0a	59.3b	66.0a	61.1b	62.8a	63.0a	62.3a
Residing on the FH (%)	52.1a	44.2b	100a*	0b*	57.8a	42.2b	49.1a	49.7a	39.7a
Married/partnership (%)	81.2a	83.0a	80.8a	81.5a	80.1a	82.4a	80.5a	82.8a	83.6a
Having children (%)	81.1a	87.3b	83.4a	83.4a	82.2a	85.0a	83.6a	83.2a	84.5a
Single ownership (%)	33.6a	20.2b	31.6a	26.1b	30.5a	28.2a	31.1a	24.5b	20.9b
Ownership with spouse (%)	30.5a	38.7b	51.9a	15.6b	33.9a	34.9a	36.0a	30.0b	12.0c
Ownership with relatives (%)	31.9a	36.3a	14.0a	52.3b	30.1a	33.1a	29.6a	39.8b	58.2c
Considering o.s. as forest farmer (%)	37.6a	7.7b	37.8a	15.5b	38.8a	15.4b	20.4a	37.2b	32.2b
Membership in FOA (%)	50.3a	44.5a	56.2a	39.5b	100a*	0b*	41.5a	57.3b	44.8a
Have attained the FH from their own parents (%)	67.0a	59.2b	57.2a	69.7b	69.2a	60.7b	61.3a	69.1b	63.7ab
Have attained the FH from their spouse's parents (%)	6.4a	16.0b	13.5a	6.3b	9.7a	11.3b	10.7a	8.6a	7.7a
Wishing one child to take over the FH (%)	34.6a	26.9b	39.4a	24.6b	36.7a	28.8b	29.7a	35.7b	26.3ab
Wishing more than one child to take over the FH (%)	26.5a	30.8b	19.5a	35.0b	26.3a	27.8a	26.5a	28.9a	34.4a
Considering o.s. as MR for decision-making wrt practical work (%)	64.1a	13.5b	51.2a	40.2b	49.1a	42.9b	45.6a	44.9a	39.1a
Considering o.s. together with spouse MR for decision-making wrt practical work (%)	65.1a	6.3b	50.9a	36.1b	47.7a	40.3b	42.7ab	44.8a	32.9b
Owners considering o.s. and partner owner MR for decision-making wrt. practical work (%)	15.9a	40.4b	29.3a	18.5b	21.7a	31.9b	27.1a	21.7b	9.2c
Owners considering o.s. and partner owner MR for decision-making wrt. practical work (%)	23.4a	8.5b	14.5a	12.0a	13.7a	16.0a	14.9a	12.8a	6.4b
Considering spouse MR for decision-making wrt practical work (%)	7.7a	6.2a	3.3a	10.9b	7.3a	7.2a	6.5a	8.3a	8.4a
Considering spouse MR for decision-making wrt practical work (%)	6.0a	3.2b	2.9a	6.8b	5.5a	4.4a	4.8a	5.2a	7.4a
Considering spouse MR for decision-making wrt practical work (%)	0.0a	16.7b	8.4a	4.1b	7.6a	7.6a	5.8ab	7.1a	2.3b
Considering spouse MR for decision-making wrt practical work (%)	0.3a	32.4b	16.5a	8.0b	10.5a	14.3b	12.9a	11.4a	2.4b
Owners considering partner owner as MR for decision-making wrt practical work (%)	7.2a	14.1b	1.7a	17.3b	6.7a	11.0b	8.5a	11.5a	23.7b
Owners considering partner owner as MR for decision-making wrt practical work (%)	7.1a	12.2b	2.0a	15.7b	7.1a	9.5b	7.2a	11.7b	20.4b

Table 1. (Cont.)

Feature or variable	Gender ^b		Resident on FH ^b		Member in FOA ^b		Size of the FH ^b		
	Male	Female	Yes	No	Yes	No	Small	Medium	Large
SE in harvesting (%)	58.2a	3.1b	47.5a	26.9b	42.5a	36.5b	40.3a	35.6b	19.7c
SE in extraction (%)	42.4a	2.0b	36.8a	18.6b	31.7a	24.8b	27.6a	27.5a	14.8b
SE in planting (%)	61.6a	34.9b	58.7a	45.1b	62.2a	44.6b	48.2a	58.0b	46.9a
SE in cleaning (%)	69.2a	12.4b	54.6a	41.8b	53.4a	45.9b	47.9a	48.9a	38.9a
SE in planning of future measures (%)	60.6a	29.1b	52.6a	45.7b	54.0a	46.8b	45.7a	54.7b	50.0ab
SE in book keeping (%)	50.3a	32.7b	50.8a	37.3b	42.5a	36.5b	42.2a	46.4a	50.8a
SE in tax-declaration (%)	40.2a	32.4b	34.6a	40.6b	52.6a	53.1a	39.1a	34.5b	27.2c
SE in contacts with timber merchants, forestry service (%)	69.9a	19.9b	58.7a	45.1b	58.0a	48.6b	50.0a	54.1b	43.6ab

1. Differences between means at the 5% level in the two or three columns are indicated by the letters a, b and c.

C = categorisation criteria.

^aFH = forest holding, FOA = forest owner association, MR = the person taking the main responsibility, SE = self-employed, wrt = with respect to.

Comparing Owners of Small, Medium and Large Forest Holdings

Two third of the owners have small size forest holdings (5-49 ha), one third medium size holdings (50-399 ha) and only 1.4% possesses holdings of 400 ha or more. Small owners are more frequently single owners but also more often own together with a spouse (Table 1). No significant difference regarding permanent living on the FH was found. A majority of large owners (58.2%) share ownership with their relatives. No difference in marriage frequency or attainment of FH from spouses' parents was found, but medium owners have more often become owners through their own parents. They also to a greater extent wish that *one* child will take over the property. The higher proportion of ownership together with relatives among large owners is reflected in how main responsibility on decision-making and practical work is distributed. Large owners more often consider partner owners as mainly responsible for both decision-making and practical work. They also to a lesser extent perform harvesting, extraction and tax-declaration themselves. Medium owners are significantly more often involved in planting and planning of future measures. Generally speaking, however, there are only minor differences between owners of different FH size with the exception of harvesting and extraction. Regarding the valuation of goods on the forest holding, medium and large owners have higher appreciation of forest income, hunting and fishing while medium owners place higher priority on upkeep of a forest farmer tradition (Table 2). Regardless the size of the FH, 28% of the owners stated that they not are willing to put aside any productive forestland for nature conservation purposes without compensation. Small owners, less often than medium and large owners, consider themselves as forest farmers (Table 1). In conclusion, the identities and social practices that appear among owners of small, medium and large holdings differ; however, the magnitudes of differences are generally less than between MO and FO, RO and NRO, and MFOA and NMFOA.

DISCUSSION AND CONCLUSIONS

A categorisation of NIPF owners based on owner's gender, place of living, membership in Forest Owners' Associations or size of the forest holding is, of course, a simplification of the complexity in family forestry. However, these variables can be useful for Swedish forestry and even in a broader European context. Comparing results from this survey with results from a study on small-scale forestry in nine European countries by Wiersum *et al.* (2005) reveals that there are basic similarities, although figures on mean values and proportions may differ in specific cases. Furthermore, an advantage with variables such as size of forest holding, owners gender and place of living, is that they generally can be recognised beforehand in most or at least some registers for example forest owner databases. Sampling, non-respondent analysis as well as main analysis can therefore be done more efficiently. Furthermore, these results emphasise the importance of including all owners on a forest holding into the sampling frame if NIPF owners in general are the target population. If the sampling frame does not include all owners, it is highly likely that the estimations will suffer from bias.

Table 2. Forest owners' valuations of various goods

Feature or variable	Gender		Resident on FH ^a		Member in FOA ^a		Size of the FH ^a		
	Male	Fem.	Yes	No	Yes	No	Small	Med.	Large
Forest income, mean score	3.2a	3.2a	3.4a	3.0b	3.6a	3.0b	2.9a	3.7b	3.9b
Hunting and fishing, mean score	2.7a	2.7a	2.7a	2.7a	2.8a	2.7a	2.6a	2.9b	3.4b
Berries and mushrooms, mean score	2.3a	3.0b	2.5a	2.4a	2.6a	2.5a	2.5a	2.7a	2.6b
Firewood and timber for own use, mean score	3.5a	3.8b	3.9a	3.4b	3.8a	3.5b	3.6a	3.6a	3.2a
Housing, mean score	3.4a	3.5b	3.9a	3.2b	3.5a	3.0b	3.4a	3.5a	3.2a
Outdoor life and recreation, mean score	3.6a	3.8b	3.7a	3.6a	3.8a	3.6a	3.6a	3.7a	3.5a
Keeping contact with native locality, mean score	3.1a	3.1a	3.3a	3.2a	3.4a	3.2b	3.2a	3.3a	3.1a
Upkeep of a forest farmer tradition, mean score	3.2a	3.2b	3.4a	3.1b	3.5a	3.0b	3.1a	3.4b	3.3ab
Owners that are not willing to put aside any productive forest land for nature conservation purposes (%)	32.0a	23.0b	34.2a	23.0b	32.7a	26.1b	28.6a	27.8a	28.1a

Note: Numbers are mean values (1 = no relevance, 5 = very important) and willingness put aside any productive forestland for nature conservation purposes without compensation in money or land.

Differences between means at the 5% level between the two or three columns are indicated by the letters a, b and c.

FH = forest holding, FOA = forest owners' association.

Putting the results of self-employment in relation to the cobweb model, decision-making and practical work turns out to be a typical 'male thing'. Viewed from a different perspective, masculinity in family forestry is to a large extent associated with being 'the one in charge' of decision-making and also the performance of many

kinds of practical and administrative work by oneself. The fact that non-resident owners and non-members of Forest Owner Associations are less involved in management activities than their contrast categories is probably due to a higher proportion of female owners. Consequently, self-employment can be regarded as a rural masculinity feature, associated with membership in Forest Owner Associations. Yet, it has to be stressed that a substantial proportion of male owners do not perform practical work themselves, and also that a high proportion of female owners do planting, planning of future activities, book-keeping and tax-declaration. Such management work, however, does not seem to yield a status as a 'proper forest farmer'.

Furthermore, the perception of being a forest farmer appears to be highly complex, and not only concerns the performance of harvesting, silviculture, administrative work and decision-making, but also the size of the forest holding. Large owners more frequently consider themselves as forest farmers than small owners, although they are less frequently involved in decision-making and practical work including harvesting activities. This difference in perception between large and small owners cannot be explained by differences in the proportion of female owners because it is similar for both categories. The fact that 37% of all owners are female and 59.2% of them have obtained the forest property from their own parents, compared to 67.0% for male owners, certainly indicates that gender has an impact on inheritance position. On the other hand, the female owners' inferior participation in management activities and less frequent perception of them as forest farmers, do not seem to disqualify women as heirs of forest properties.

There are differences in ownership constellations between female owners and male owners, resident owners and non-resident owners, small, medium and large owners, which set up different management and inheritance conditions for the individual owner. It seems that owners in those categories that share ownership with relatives are also more interested in letting more than one child take over the forest holding. Further, the entrance to forest ownership by marriage does vary between male owners and female owners, resident owners and non-resident owners, and members and non-members of Forest Owners' Associations, indicating the impact of marriage as an institution.

The fiscal and policy impact of the tax system, has not been covered by this survey for methodological reasons. In order to collect reliable data on people's income or sales and taxes, other means than a voluntary survey are recommended. However, a recent study by Holmgren *et al.* (2005) demonstrated that compared to non-resident owners, resident owners invest a higher share of their sales revenue, most likely as a result of a higher input of self-employment. Finally, this cobweb model has demonstrated its general potential as a theoretical base from which to generate hypothesis and interpretations regarding family forestry in Sweden as well as other countries with comparable social conditions. From a Swedish point of view, the persistence of family forestry as such, forest owners' investment behaviour and their interest in cooperation, are questions of particular interest.

ACKNOWLEDGMENTS

This study is linked to the FOR research program, which aims at improved safety and working conditions in family forestry, and also a research program on Cooperative Models for Forest Owners. We thank Stiftelsen Lantbruksforskning and Brattåsstiftelsen for their financial support. We also thank Mr Patrik Häggqvist for providing constructive comments on earlier drafts of the manuscript.

REFERENCES

- Ågren, M. (1997), *Att hävda sin rätt. Synen på jordägandet i 1600-talets Sverige, speglad i institutet urminnes hävd*, Rättshistoriska Bibliotek Band 57, Stockholm.
- Andersson, S. (1982), *Ny teknik i skogen*, Sekretariatet för framtidsstudier, Liber.
- Acker, J. (1992), 'Gender organizational theory', in A.J. Mills and P. Trancred (eds), *Gender Organisational Analysis*, Sage, London, pp. 248-260.
- Ager, B. (1995), 'Om självverksamhet, rationalitet och teknikval i småskogsbruket' (Self-employment, efficiency and choice of technology in non-industrial private forestry), Research Notes No. 282, Department of Operational Efficiency, Swedish University of Agricultural Sciences, Garpenberg. [In Swedish with English summary].
- Bhaskar, R. (1998), *The Possibility of Naturalism. A Philosophical Critique of the Contemporary Human Science*, 3rd edn, Routledge, Taylor and Francis, London.
- Brandth, B. (1995), 'Rural masculinity in transition: gender images in tractor advertisement', *Journal of Rural Studies*, 11(2): 123-133.
- Brandth, B. and Haugen M.S. (1998), 'Breaking into the masculine discourse. Women and farm forestry', *Sociologia Ruralis*, 38(3): 427-442.
- Bourdieu, P. (1986), *Distinctions – A social Critique of the Judgement of Taste*, Taylor and Francis, London.
- Dahlin, B. and Eriksson, L. (1992), 'Vägar till bättre lönsamhet för privatskogsbruket' (Better profitability in private forestry – New approaches), Report No. 21, Department of Forest Industry Market Studies, Swedish University of Agricultural Sciences, Uppsala. [In Swedish with English summary].
- Environmental Code (1998), Miljöbalk, SFS 1998: 808. [Swedish Code of Status], Government of Sweden, Stockholm
- Flygare, I.A. (1999), 'Generation och kontinuitet. Familjejordbruket i två svenska slättbygder under 1900-talet' (Generations and continuity. Family farming in two Swedish grain-growing districts in 20th Century), PhD Dissertation, Uppsala: Upplands Fornminnesförenings Tidskrift 54, Upplands Fornminnesförenings Förlag. [In Swedish with English summary].
- Furubotn, E.G. and Pertovich, S. (1972), 'Property rights and economic theory: A survey of recent literature', *Journal of Economic Literature*, 10(4): 1137-1162.
- Gadd, C-J. (2000), *Den agrara revolutionen 1700-1870*, Natur och Kultur/LTs förlag, Borås.
- Harrison, S.R., Herbohn, J.L. and A. Niskanen (2002), 'Non-industrial, smallholder, small-scale and family forestry: What's in a name?', *Small-scale Forest Economics, Management and Policy*, 1(1): 1-11.
- Haugen, M.S. (1994), 'Rural women's status in family property laws: Lessons from Norway', in S. Whatmore, P. Marsden and P. Love (eds), *Gender and Rurality. Critical perspectives on Rural Change Series VI*, David Fulton Publishers, London, pp. 87-101.
- Heckscher E.F. (1957), *Svenskt Arbete och liv*, Aldus Böcker, Stockholm.
- Holmgren, L., Lidestav, G. and Nyquist, S. (2005), 'Taxation and investment implications of non-industrial private forestry in a Boreal Swedish municipality', *Small-scale Forest Economics, Management and Policy*, 4(1): 35-51.
- Håkansson, S. (2002), *Räntefördelningen och dess påverkan på skogsbruket*, University Press, Växjö, pp. 86-90.

- Ingemarsson, F. (2004), 'Small-scale Forestry in Sweden – Owners' Objectives, Silvicultural Practices and Management Plans', PhD dissertation, *Acta Universitatis Agriculturae Sueciae, Silvestria 318*, Swedish University of Agricultural Sciences, Uppsala.
- Kardell, L. (2003), *Svenskarna och skogen, Del 1, Från ved till linjeskepp*, Skogsstyrelsens Förlag, Jönköping.
- Lidestav, G. (1998), 'Women as non-industrial private forest landowners in Sweden', *Scandinavian Journal of Forest Research*, 13(1): 66-73.
- Lidestav, G. and Ekström, M. (2000), 'Introducing gender in studies on management behaviour among non-industrial private forest owners', *Scandinavian Journal of Forest Research*, 15(3): 378-386.
- Lidestav, G. (2001), 'Kräver skogen sin man eller duger en kvinna?' (Does the forest demand men, or will a woman do?), in B. Liljewall, K. Niskanen and M. Sjöberg (eds), *Kvinnor och jord. Arbete och ägande från medeltid till nutid*, Skrifter om skogs- och lantbrukshistoria nr. 15, Nordiska museets förlag, Lund, pp. 159-173. [In Swedish with English summary].
- Lidestav, G. (2003), *I konkurrens med en bror. Könsrelaterade överlåtelsemönster inom det samtida svenska familjeskogsbruket*, Working Papers 183, Department of Silviculture, Swedish University of Agricultural Sciences, Umeå.
- Lidestav, G. and Nordfjell, T. (2003), 'Swedish non-industrial private forestry in transformation', in C. Berlin, G. Lidestav, and O. Lindroos (eds), *Forest Operation Improvements in Farm Forest*, Report No. 56, Department of Silviculture, Swedish University of Agricultural Sciences, Umeå, pp. 24-33.
- Löfgren, O. (1977), *Familj och hushåll – släkt och äktenskap*, I: Land och stad, Lund.
- Lönnstedt, L. (1997), 'Non-industrial private forest owners decision process: A qualitative study about goals, time perspective, opportunities and alternatives', *Scandinavian Journal of Forest Research*, 12(3): 302 - 310.
- Miegel, F. and Johansson, T. (2002), *Kultursociologi*, Studentlitteratur, Lund.
- Morell, M. (2001), *Jordbruket i industrisamhället 1870-1945*, Natur och Kultur/LTs förlag, Borås.
- National Board of Forestry (2004), *Statistical Yearbook of Forestry 2004*, Jönköping, Sweden.
- Niskanen, K. (2001), 'Husbondeväldets röst. Äktenskap, egendom och kön under första delen av 1900-talet' (The voice of male domination. Marriage, property and gender during the first part of the twentieth century), in B. Liljewall, K. Niskanen and M. Sjöberg (eds), *Kvinnor och jord. Arbete och ägande från medeltid till nutid*, Skrifter om skogs- och lantbrukshistoria No. 15, Nordiska museets förlag, Lund, pp. 131-158. [In Swedish with English summary].
- Rabe, G. (2002), *Det svenska skattesystemet*, Nordstedts Juridik AB, Stockholm.
- Rubin, G. (1975), 'The Traffic in Women: Notes on the 'Political Economy' of Sex', in R.R. Reiter, *Towards an Antropology of Women*, Monthly Review Press, London, pp. 157-210.
- Schwarz, G. (1966), *Allgemeine Siedlungsgeographie*, Walter de Gruyter, Berlin.
- SFS (Swedish Code of Statutes) (1979), *Jordförvärvslag 1979: 230* [Law concerning restrictions on the right to acquire farm property] Ministry of Agriculture, Stockholm.
- SFS (Swedish Code of Statutes) (1979), *Skogsvårdslag. SFS 1979: 429*, [Swedish Forest Act], Government of Sweden, Stockholm.
- Sjöberg, M. and Ågren, M. (2003), 'Egendom, kön och förändring', in M. Ågren (ed.), *Hans och Hennes, Genus och egendom i Sverige från vikingatid till nutid*, Opuscula Historica Upsaliensia 30, Department of History, University of Uppsala, pp. 5-36.
- Skogsstyrelsen (National Board of Forestry) (1994), *Skogsvårdslagen*, Handbok, Jönköping.
- Statens offentliga utredningar (SOU) (1973:14), *Mål och medel i skogspolitiken*, Betänkande utgivet av skogspolitiska utredningen, Stockholm.
- Statens offentliga utredningar (SOU) (1992:76), *Skogspolitiken inför 2000-talet: huvudbetänkande av 1990 års skogspolitiska kommitté samt bilagor I and II: Allmänna förlaget*, Stockholm.
- Statens offentliga utredningar (SOU) (1997:11), *Skatter, miljö och sysselsättnin*, Bilagedel, underlagsrapport till kommitténs slutbetänkande, Fritzes Offentliga Publikationer, Stockholm.
- Statistics Sweden (1994), *Ägereförhållandena i skogsbruket*, Specialstudie i samband med 1992 års lantbruksräkning, Statistiska Meddelanden J 1994:13, Jönköping. [In Swedish with English summary].

- Stoller, R.J. (1968), *Sex and Gender*, Hogart Press, London.
- Sörlin, S. (1988), 'Framtidslandet. Debatten om Norrland och naturresurserna under det industriella genombrottet', PhD Dissertation, Acta Regiae Societatis Skytteanae Nr. 33, Umeå.
- Thirsk, J. (1978), 'The European debate on customs of inheritance 1500 – 1700', in J. Goody, J. Thirsk and E.P. Thompson, *Family and Inheritance*, Cambridge University Press, Cambridge
- Törnqvist, T. (1995), 'Skogsrikets arvingar: En sociologisk studie av skogsägarskapet inom privat, enskilt skogsbruk' (Inheritors of the Woodlands. A Sociological Study of Private, Non-Industrial Forest Ownership), PhD dissertation, Department of Forestry-Industry-Market studies, Report 41, Swedish University of Agricultural Sciences, Uppsala. [In Swedish with English summary].
- Westholm, E. (1992), 'Mark, människor och moderna skiftesreformer', Geografiska Regionstudier 25, PhD dissertation, Department of Social and Economic Geography, Uppsala University, Uppsala. [In Swedish with English summary].
- Whatmore, S. (1991), 'Life Cycle or Patriarchy? Gender Division in Family Farming', *Journal of Rural Studies*, 7(1/2): 71-76.
- Wiersum, K.F., Elands, B.H.M. and Hoogstra, M.A. (2005), 'Small-scale forest ownership across Europe: Characteristics and future potential' rather, *Small-scale Forest Economics, Management and Policy*, 4(1): 1-19.